REMARKS

Applicants request entry of this amendment in adherence with 37 C.F.R. 1.821-1.825. This amendment is accompanied by a computer disk containing sequences identified in the application (SEQ ID NOS:1-2) in computer readable form, and a paper copy of the sequence information which has been printed from the computer disk.

The information contained in the computer readable disk was prepared through the use of the software program "PatentIn" and is identical to that of the paper copy. This amendment and accompanying copies of the Sequence Listing contain no new matter.

Pending claims 1-14 were examined and rejected. The claims have been amended as noted above. Reexamination and reconsideration of the claims are respectfully requested.

Claims 1-14 were rejected under 35 U.S.C. 102(e) as being anticipated by Dubrow, et al. (US 5976336).

Claim 1 has been amended to correct a typographical error. Claim 1 describes a capillary array electrophoresis plate comprising, among other elements, an injection channel having a first leg connected at one end to a plurality of sample reservoirs and at the other end to the separation channel, and a second leg connected at one end to the separation channel and at the other end to a waste reservoir. The Examiner has not specified which channels in Dubrow et al. are believed to correspond to the first leg and second leg described in claim 1 of the instant application. Applicants do not find corresponding elements in Dubrow et al. In particular, Applicants to not find any channel which corresponds to the description of the second leg. For example, the load/waste channel 382 of Dubrow et al. is connected at one end to the load/waste reservoir 386 and at the other end to the sample loading channel 314, as opposed to the main channel 304.

Further, in regards to dependent **claim 2** of the instant application, the load/waste channel 382 is not collinear with any other channel, particularly a channel

which is connected at one end to a plurality of sample reservoirs and at the other end to the separation channel, such as would fit the description of the first leg of the instant application. For at least the above reasons, Applicants believe **claim 1 and dependent claims 2-3** are allowable in view of this rejection.

Claim 4 describes a capillary array electrophoresis plate comprising, among other elements, an array of separation channels. In Dubrow et al. each device 300 is described and illustrated to have a single separation channel (main channel 304 in Fig. 3), rather than an array. Therefore, Applicants believe **claim 4 and dependent claims 5-7** are allowable.

Claim 8 describes a method comprising, among other steps, providing a capillary array electrophoresis plate as described in claim 1, and has been amended to correct the same typographical error as in claim 1. Since the plate of claim 1 has been differentiated from Dubrow et al., **claim 8** is also differentiated and allowable in view of Dubrow et al. for the same reasons as stated above in relation to claim 1.

Claim 9 describes a method comprising, among other steps, providing a capillary array electrophoresis plate as described in claim 4. Since the plate of claim 4 has been differentiated from Dubrow et al., **claim 9** is also differentiated and allowable in view of Dubrow et al. for the same reasons as stated above in relation to claim 4.

Claim 10 has been amended to specify that the capillary array electrophoresis plate comprises an array of separation channels and an array of injection channels. In Dubrow et al. each device 300 is described and illustrated to have a single separation channel (main channel 304 in Fig. 3), rather than an array. Therefore, Applicants believe **claim 10** to be allowable.

Claim 11 describes a method comprising, among other steps, providing a capillary array electrophoresis plate as described in claim 10. Claim 11 has been amended in the same manner as amended claim 10 to specify that the capillary array electrophoresis plate comprises an array of separation channels and an array of injection channels. Since the plate of amended claim 10 has been differentiated from Dubrow et al., **claim 11 along with dependent claims 12-14** are also differentiated and allowable in

view of Dubrow et al. for the same reasons as stated above in relation to claim 10. Claims 12- 14 have also been amended to correct typographical errors.

Claims 1-7 and 10 were rejected under 35 U.S.C. 102(e) as being anticipated by Simpson et al. (US 6143152).

Applicants respectfully request that this rejection be withdrawn. The instant application has the same inventive entities as Simpson, et al. Therefore, the Simpson et al. patent is not filed by "another" as stipulated by 35 U.S.C. 102(e).

Claims 1-7 and 10 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, 4-8, 10-13, 15-17, 19-22, 24, 27, 29, 39 of U.S. Patent No. 6,143,152.

Applicant intends to file a terminal disclaimer when the Examiner indicates that allowable subject matter exists in the application. While it is possible that some original claim language might necessitate a terminal disclaimer, it is also possible that amended claims that are finally accepted may not. Consequently, this rejection cannot be properly assessed until claims are found to be otherwise allowable in the Application.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION:

The paragraph beginning on page 14, line 25, has been amended as follows:

In this experiment, samples were prepared using PCR amplification and digestion to assay the C282Y mutation in the HFE gene. This G A mutation at nucleotide 845 creates a *Rsa* I restriction site in the HFE gene. DNA materials were isolated from peripheral blood leukocytes using standard methods. A segment of an HFE exon containing the variant site was amplified with the following primers:

HH-E4B: 5' GACCTCTTCAGTGACCACTC 3' (SEQ ID NO:1)

HC282R: 5' CTCAGGCACTCCTCTCAACC 3' (SEQ ID NO:2).

IN THE CLAIMS:

1. (Amended) A capillary array electrophoresis plate, comprising:

a separation channel having a cathode reservoir at one end and an anode reservoir at an opposite end; and

an injection channel having a first leg and a second leg, the first leg connected at one end to a plurality of sample reservoirs and at the other end to the separation channel, and the second leg connected at one end to the separation channel and at the other end to a waste reservoir.

8. (Amended) A method of sequentially loading a plurality of different samples onto an electrophoretic separation channel, comprising:

providing a capillary array electrophoresis plate, comprising:

a separation channel having a cathode reservoir at one end and an anode reservoir at an opposite end; and

an injection channel having a first leg and a second leg, the first leg connected at one end to a plurality of sample reservoirs and at the other end to the

separation channel, and the second leg connected at one end to the separation channel and at the other end to a waste reservoir;

moving a first sample from a first sample reservoir through first leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the first sample in the separation channel; and subsequently,

moving a second sample from a second sample reservoir through first leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the second sample in the separation channel.

10. (Amended) A capillary array electrophoresis plate, comprising:

an array of separation channels each having a cathode reservoir at one end and an anode reservoir at an opposite end; and

an array of injection channels each having a first leg and a second leg, wherein,

the first leg is connected at one end to a first waste reservoir and at the other end to one of the separation channels, and a first plurality of sample reservoirs are connected to the first leg along the length of the first leg; and

the second leg is connected at one end to a second waste reservoir and at the other end to one of the separation channels, and a second plurality of sample reservoirs are connected to the second leg along the length of the second leg.

11. (Amended) A method of sequentially loading four different samples onto an electrophoretic separation channel, comprising:

providing a capillary array electrophoresis plate, comprising:

an array of separation channels each having a cathode reservoir at one end and an anode reservoir at an opposite end; and

an array of injection channels each having a first leg and a second leg, wherein,

the first leg is connected at one end to a first waste reservoir and at the other end to one of the separation channels and a plurality of sample reservoirs are connected to the first leg along the length of the first leg; and

the second leg is connected at one end to a second waste reservoir and at the other end to one of the separation channels and a plurality of sample reservoirs are connected to the second leg along the length of the second leg;

moving a first sample from a first sample reservoir through first leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the first sample in the separation channel.

12. (Amended) The method of claim 11, further comprising:

moving a second sample from a second sample reservoir through first leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the second sample in the separation channel**[; and subsequently]**.

13. (Amended) The method of claim **[11]** 12, further comprising:

moving a third sample from a third sample reservoir through second leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the third sample in the separation channel**[; and subsequently]**.

14. (Amended) The method of claim **[11]** 13, further comprising:

moving a fourth sample from a **[second]** fourth sample reservoir through second leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the fourth sample in the separation channel.

APPENDIX A
CLEAN VERSION OF ALL PENDING CLAIMS

1. (Amended) A capillary array electrophoresis plate, comprising:

a separation channel having a cathode reservoir at one end and an anode reservoir at an opposite end; and

an injection channel having a first leg and a second leg, the first leg connected at one end to a plurality of sample reservoirs and at the other end to the separation channel, and the second leg connected at one end to the separation channel and at the other end to a waste reservoir.

2. (As filed) The capillary array electrophoresis plate of claim 1, wherein the first and second legs of the injection channel are disposed collinear with one another.

3. (As filed) The capillary array electrophoresis plate of claim 1, wherein the first leg of the injection channel is connected at one end to a loading channel connected to the plurality of sample reservoirs.

4. (As filed) A capillary array electrophoresis plate, comprising:

an array of separation channels, each separation channel having a cathode reservoir at one end and an anode reservoir at an opposite end; and

an array of injection channels, each injection channel having a first leg and a second leg, the first leg connected at one end to a plurality of sample reservoirs and at the other end to one of the separation channels, and the second leg connected at one end to one of the separation channels and at the other end to a waste reservoir.

5. (As filed) The capillary array electrophoresis plate of claim 4, wherein the cathode reservoirs are multiplexed.

6. (As filed) The capillary array electrophoresis plate of claim 4, wherein the anode reservoirs are multiplexed.

7. (As filed) The capillary array electrophoresis plate of claim 4, wherein the waste reservoirs are multiplexed.

8. (Amended) A method of sequentially loading a plurality of different samples onto an electrophoretic separation channel, comprising:

providing a capillary array electrophoresis plate, comprising:

a separation channel having a cathode reservoir at one end and an anode reservoir at an opposite end; and

an injection channel having a first leg and a second leg, the first leg connected at one end to a plurality of sample reservoirs and at the other end to the separation channel, and the second leg connected at one end to the separation channel and at the other end to a waste reservoir;

moving a first sample from a first sample reservoir through first leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the first sample in the separation channel; and subsequently,

moving a second sample from a second sample reservoir through first leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the second sample in the separation channel.

9. (As filed) A method of sequentially loading a plurality of different samples onto an electrophoretic separation channel, comprising:

providing a capillary array electrophoresis plate, comprising:

an array of separation channels, each separation channel having a cathode reservoir at one end and an anode reservoir at an opposite end; and

an array of injection channels, each injection channel having a first leg and a second leg, the first leg connected at one end to a plurality of sample reservoirs and at the other end to one of the separation channels, the second legs connected at one end to one of the separation channels and at the other end to a waste reservoir;

moving a plurality of first samples from the plurality of first sample reservoirs through the plurality of first legs of the injection channels and into the plurality of separation channels; and subsequently,

electrophoretically separating the plurality of first samples in the separation channel; and subsequently,

moving a plurality of second samples from the plurality of second sample reservoirs through the plurality of first legs of the injection channels and into the plurality of separation channels; and subsequently,

electrophoretically separating the plurality of second samples in the separation channel.

10. (Amended) A capillary array electrophoresis plate, comprising:

an array of separation channels each having a cathode reservoir at one end and an anode reservoir at an opposite end; and

an array of injection channels each having a first leg and a second leg, wherein,

the first leg is connected at one end to a first waste reservoir and at the other end to one of the separation channels, and a first plurality of sample reservoirs are connected to the first leg along the length of the first leg; and

the second leg is connected at one end to a second waste reservoir and at the other end to one of the separation channels, and a second plurality of sample reservoirs are connected to the second leg along the length of the second leg.

11. (Amended) A method of sequentially loading four different samples onto an electrophoretic separation channel, comprising:

providing a capillary array electrophoresis plate, comprising:

an array of separation channels each having a cathode reservoir at one end and an anode reservoir at an opposite end; and

an array of injection channels each having a first leg and a second leg, wherein,

the first leg is connected at one end to a first waste reservoir and at the other end to one of the separation channels and a plurality of sample reservoirs are connected to the first leg along the length of the first leg; and

the second leg is connected at one end to a second waste reservoir and at the other end to one of the separation channels and a plurality of sample reservoirs are connected to the second leg along the length of the second leg;

moving a first sample from a first sample reservoir through first leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the first sample in the separation channel.

12. (Amended) The method of claim 11, further comprising:

moving a second sample from a second sample reservoir through first leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the second sample in the separation channel.

13. (Amended) The method of claim 12, further comprising:

moving a third sample from a third sample reservoir through second leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the third sample in the separation channel.

14. (Amended) The method of claim 13, further comprising:

moving a fourth sample from a fourth sample reservoir through second leg of the injection channel and into the separation channel; and subsequently,

electrophoretically separating the fourth sample in the separation channel.